

Turbo air REFRIGERATOR MANUFACTURER

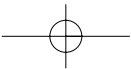
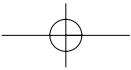
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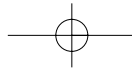


Commercial Refrigerator Service Manual

Horizontal Bottle Coolers

**Model No.: TBC-50SD/SB
TBC-65SD/SB
TBC-95SD/SB**

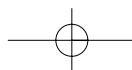




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**Model No.: TBC-50SD/SB
TBC-65SD/SB
TBC-95SD/SB**



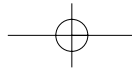


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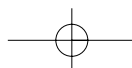
5. ELECTRONIC CONTROLLER INSTRUCTION

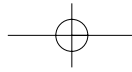
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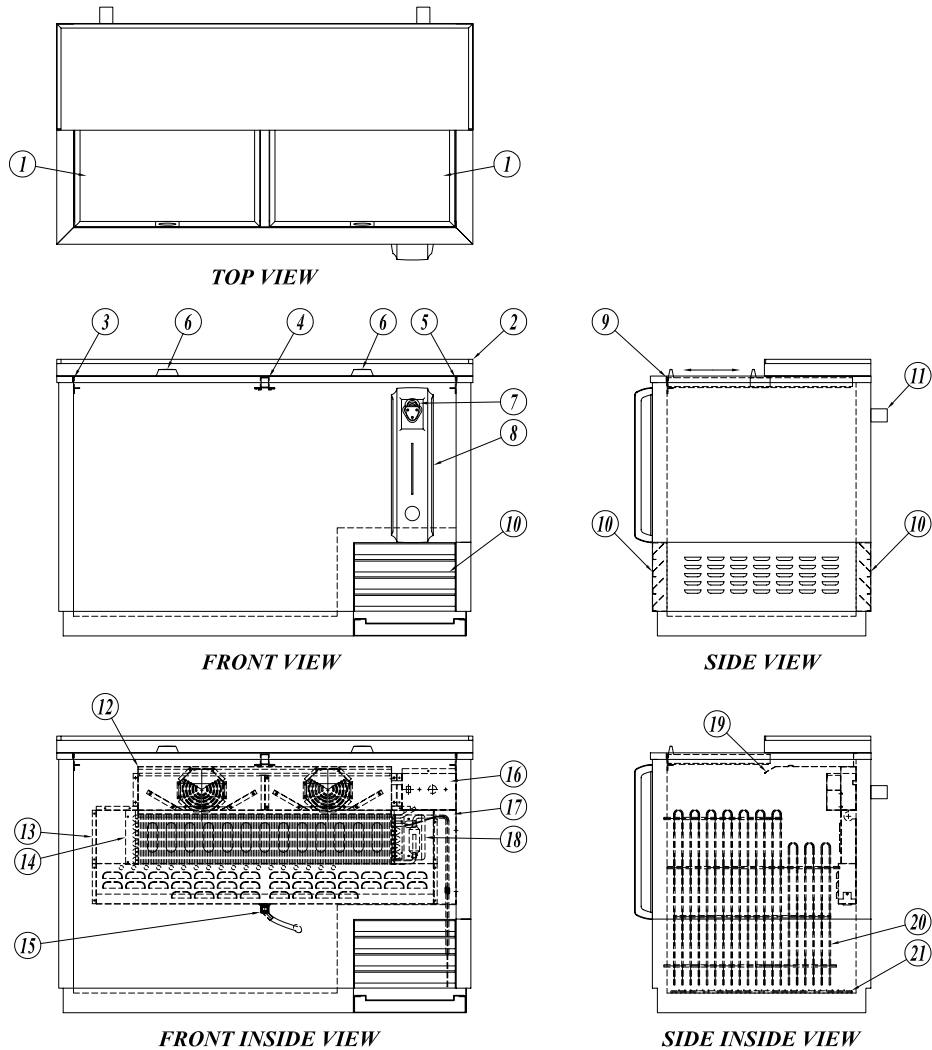
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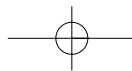


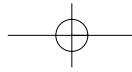
1. FEATURE CHART

1-1. TBC-50SD/SB, TBC-65SD/SB (Width of 65SD/SB is different from 50SD/SB'S.)



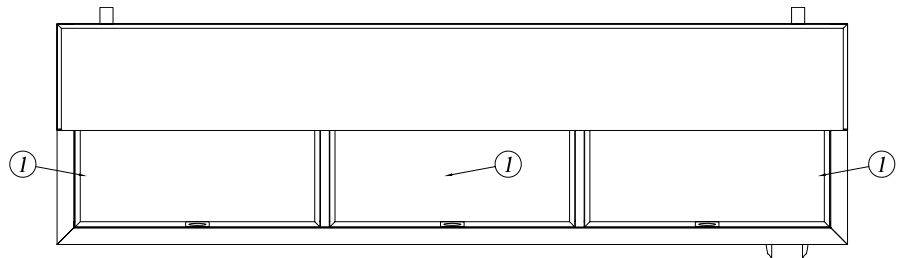
- | | |
|--------------------------------|----------------------------------|
| 1 LID | 11 CUSHION SPACER |
| 2 COUNTERTOP | 12 DUCT(A) |
| 3 LID RAIL LEFT | 13 DUCT(B) (LOUVERED) |
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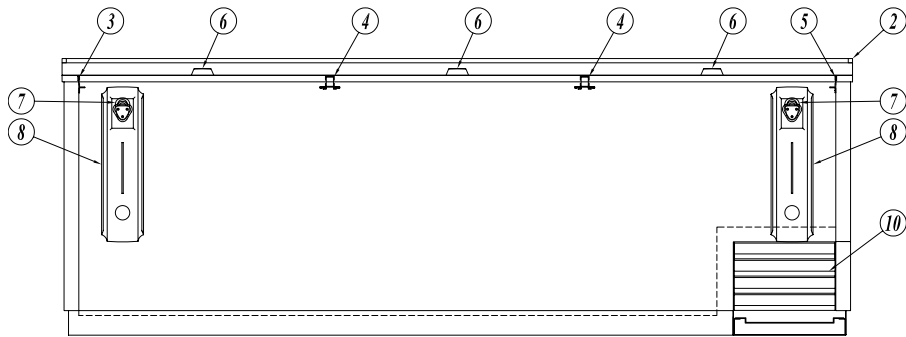


FEATURE CHART

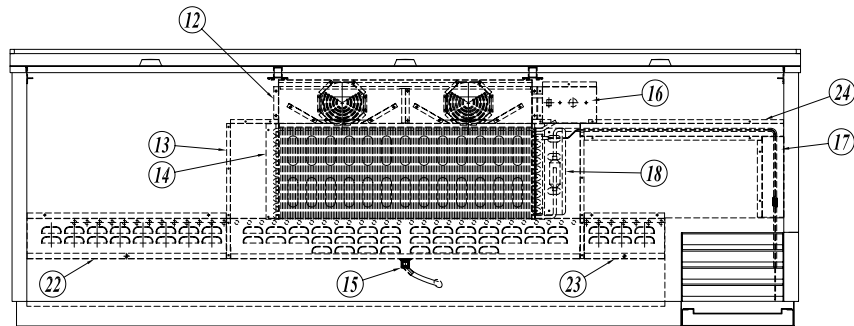
1-2. TBC-95SD/SB



TOP VIEW

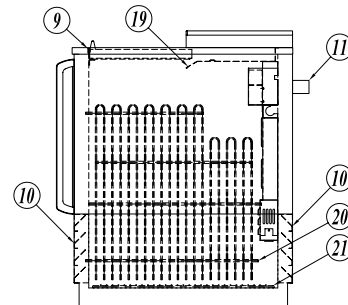


FRONT VIEW

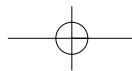


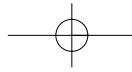
FRONT INSIDE VIEW

- 22 DUCT(C)
23 DUCT(D)
24 SUCTION LINE COVER(HORIZONTAL)



SIDE INSIDE VIEW

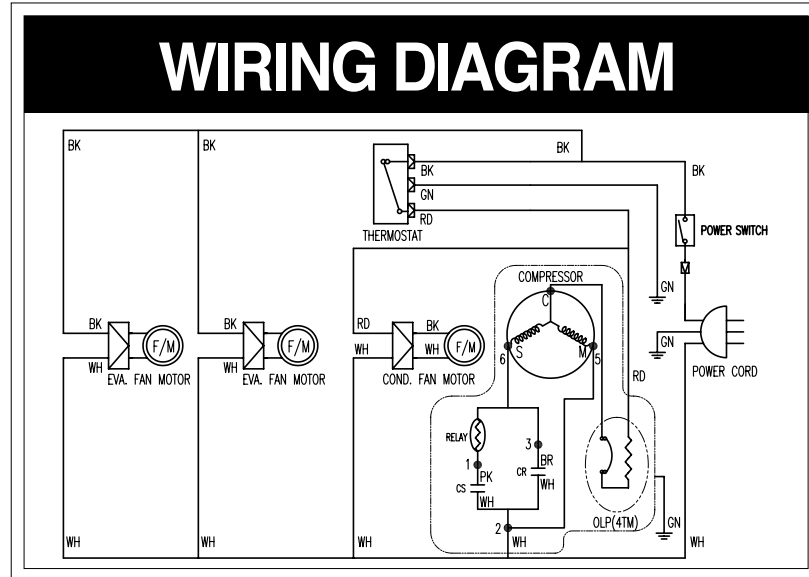




2. WIRING DIAGRAM

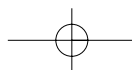
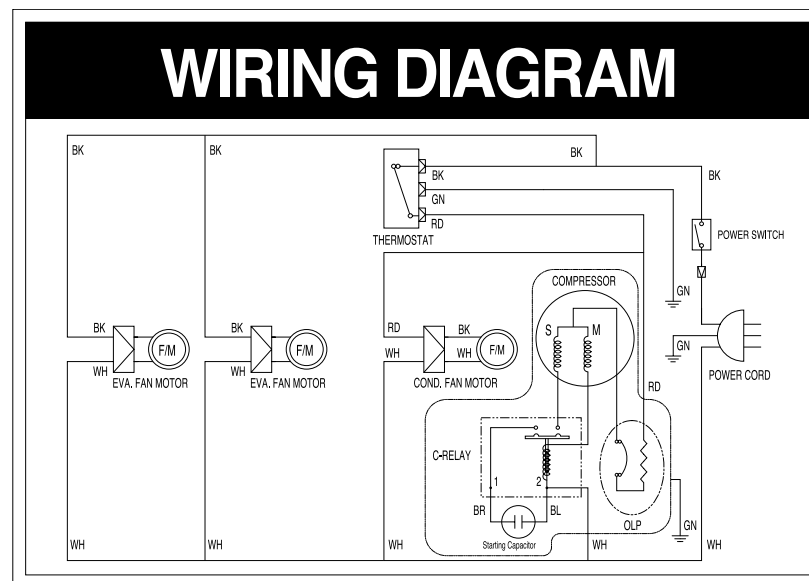
2-1. TBC-50SD/SB, TBC-65SD/SB

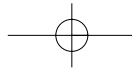
* In this diagram compressor maker is SAMSUNG.



2-2. TBC-95SD/SB (or TBC-50SD/SB in old models)

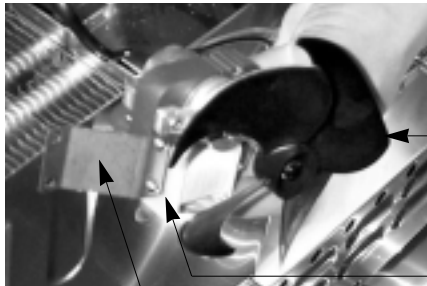
* In this diagram compressor maker is Tecumseh.





3. PART DETAILS

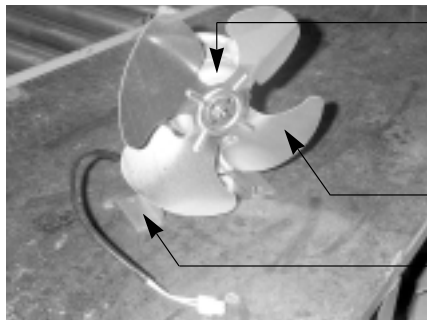
3-1. EVAPORATOR FAN MOTOR



EVAPORATOR FAN BLADE

EVAPORATOR FAN MOTOR
BRACKET

3-2. CONDENSER FAN MOTOR



CONDENSER FAN MOTOR

CONDENSER FAN BLADE

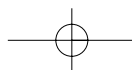
BRACKET

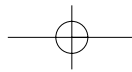
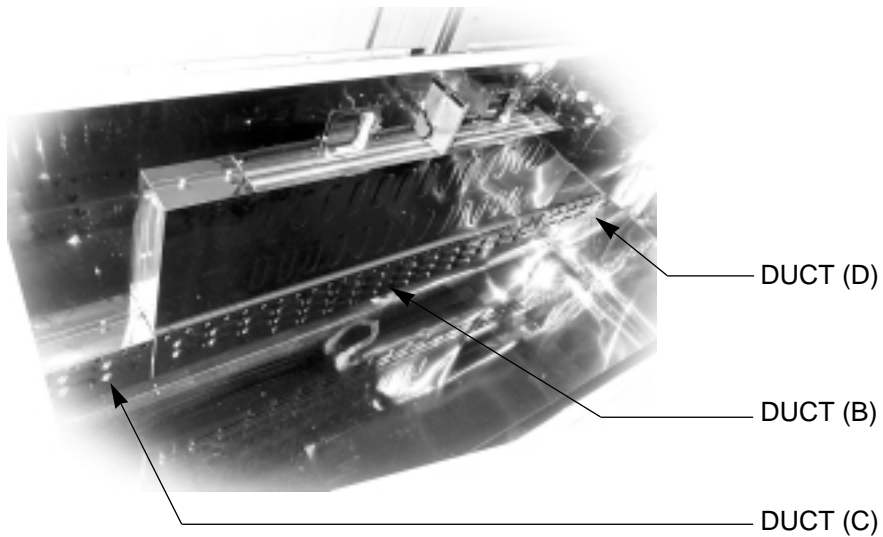
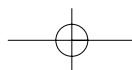
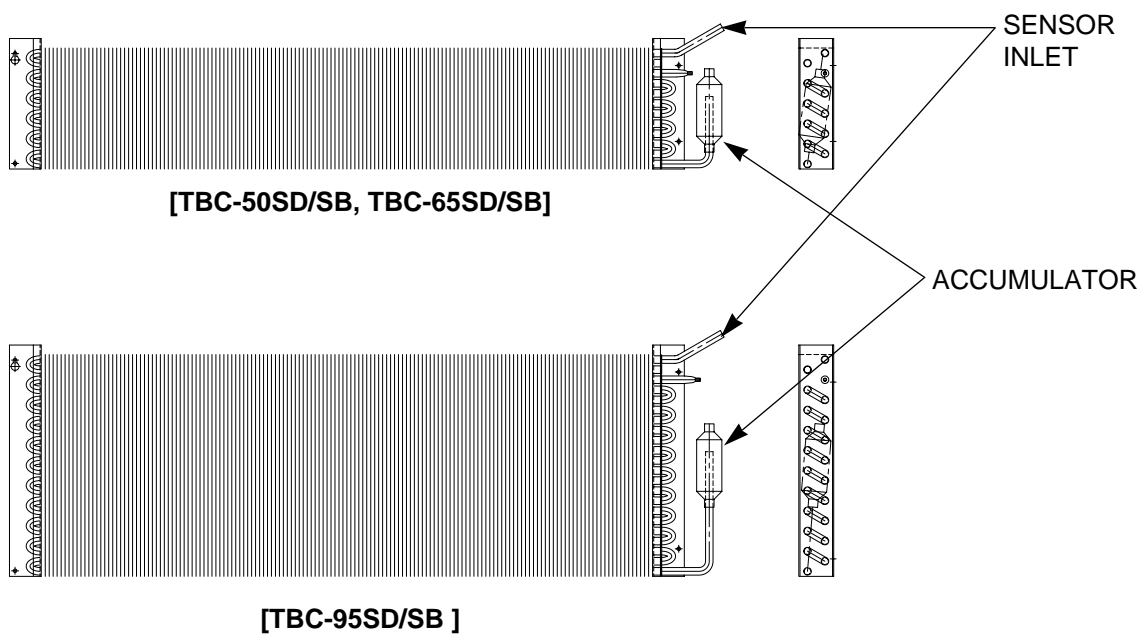
3-3. DUCT(A)

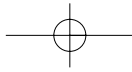
1) OLD STYLE (Stainless Steel)



2) NEW STYLE (Plastic)

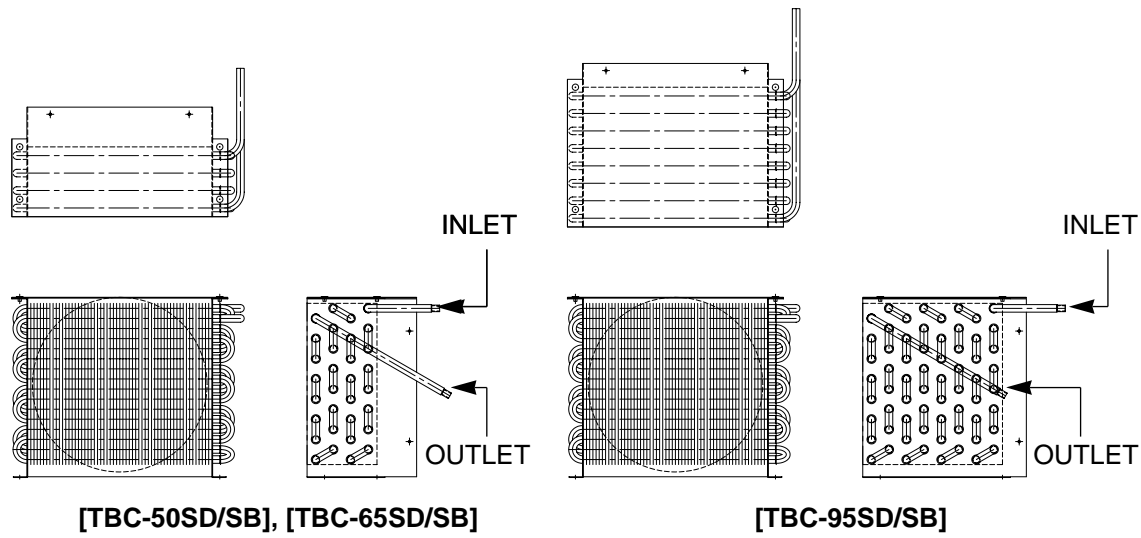


**PART DETAILS****3-4. DUCT(B), (C), (D)****3-5. EVAPORATOR COIL**

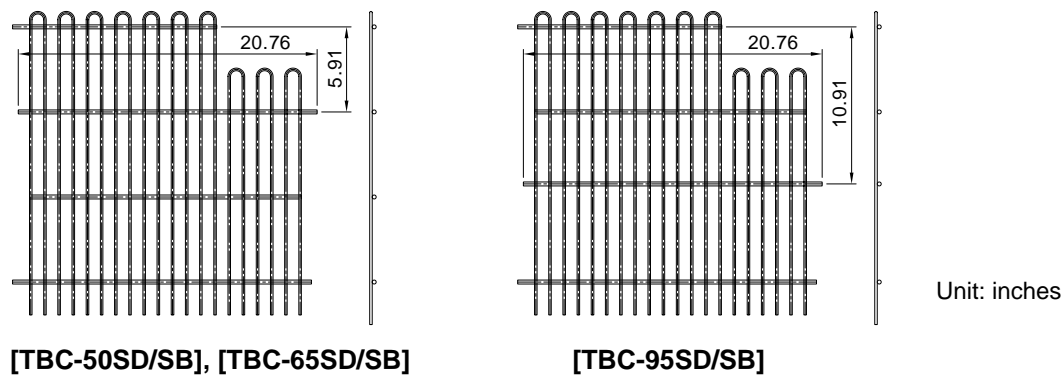


PART DETAILS

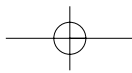
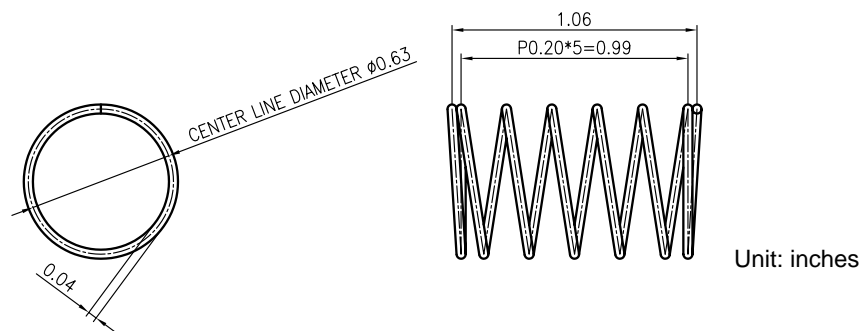
3-6. CONDENSER COIL

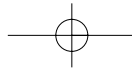
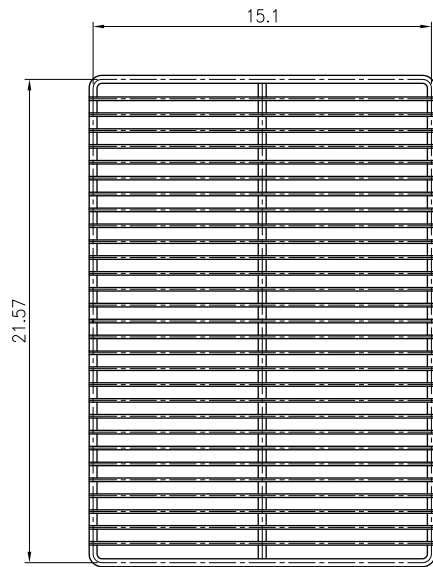
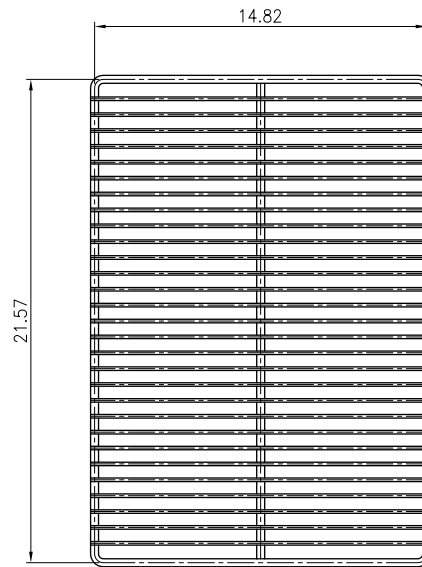


3-7. DIVIDER

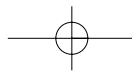
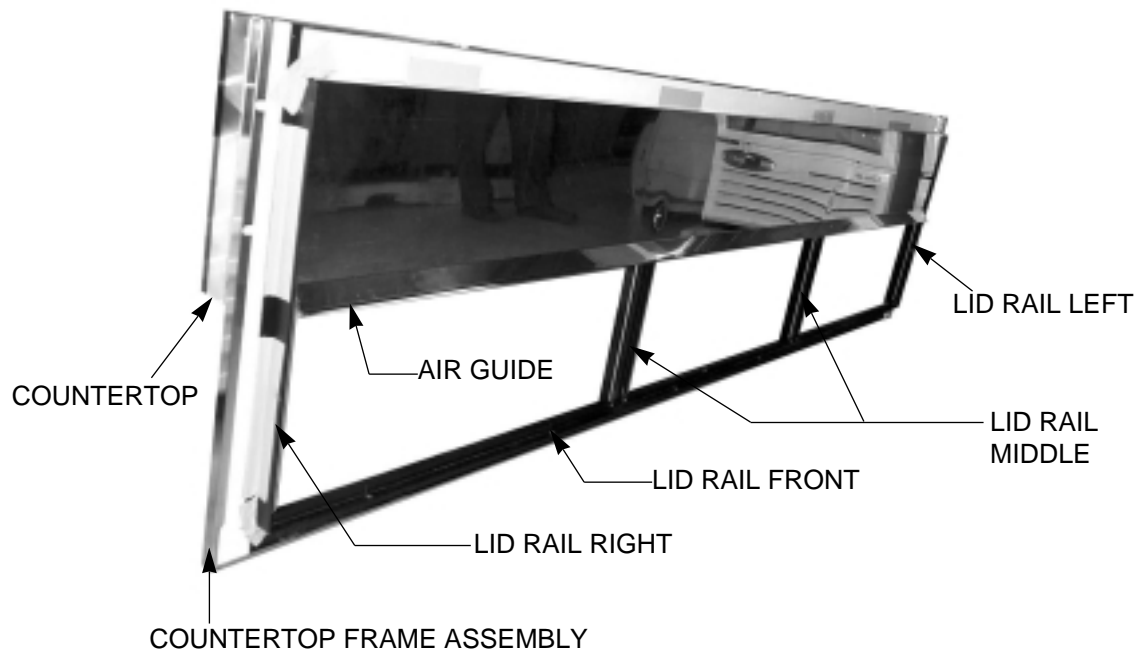


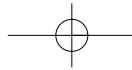
3-8. DIVIDER SPRING



**PART DETAILS****3-9. SHELF BOTTOM****[TBC-50SD/SB]****[TBC-95SD/SB], [TBC-65SD/SB]**

Unit: inches

3-10. COUNTERTOP



4. MAIN COMPONENTS

4-1. COMPRESSOR

MODEL	PART NAME	PART NO.	HORSE POWER	CAPACITY	TYPE OF MOTOR	INPUT	MAKER
TBC-50SD/SB (OLD MODEL)	CAE4440Y	30200B4200	1/3HP	4,112BTU/h (1,037Kcal/h)	CSIR	—	TECUMSEH EUROPE
TBC-95SD/SB	CAE4456Y	30200B4500	1/2HP	5,592BTU/h (1,410Kcal/h)	CSIR	—	TECUMSEH EUROPE
TBC-50SD/SB TBC-65SD/SB	SK1A1C-L2W	30200Q1200	1/3HP	303 Kcal/h	CSR	—	SAMSUNG

4-2. COMPRESSOR RELAY, OVERLOAD

MODEL	RELAY	PART NO.	OVERLOAD	PART NO.	MAKER	NOTE
TBC-50SD/SB (OLD MODEL)	MTRPH0033	Comp.Assembly	MRT16AHKE	Comp.Assembly	—	—
TBC-95SD/SB	3ARR12KP*498	Comp.Assembly	MST16AGZ	Comp.Assembly	—	—
TBC-50SD/SB TBC-65SD/SB	22Ω - 3PIN	Comp.Assembly	4TM795TFBZZ-53	Comp.Assembly	—	—

4-3. COMPRESSOR CAPACITOR

MODEL	STARTING	PART NO.	RUNNING	PART NO.	MAKER	NOTE
TBC-50SD/SB (OLD MODEL)	315μF/160V	Comp. Assembly	—	—	—	—
TBC-95SD/SB	315μF/160V	Comp. Assembly	—	—	—	—
TBC-50SD/SB TBC-65SD/SB	125μF/125V	Comp. Assembly	12μF/250V	Comp. Assembly	—	—

4-4. CONDENSER FAN MOTOR

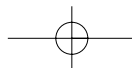
MODEL	PART NAME	PART NO.	POLE	INPUT	TYPE	BLADE (NUMBER)	MAKER
TBC-50SD/SB TBC-65SD/SB TBC-95SD/SB	IS4420DWSG-1	3963220410	4P	47W	Shaded Pole Induction	AL 4	SUNGSHIN

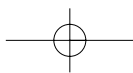
4-5. EVAPORATOR FAN MOTOR

MODEL	PART NAME	PART NO.	POLE	INPUT	TYPE	BLADE (NUMBER)	MAKER
TBC-50SD/SB TBC-65SD/SB TBC-95SD/SB	DAI-6152DEUA	3963339900	2P	22.5W	Shaded Pole Induction	NA-66 4	DAEYOUNG

4-6. SWITCH

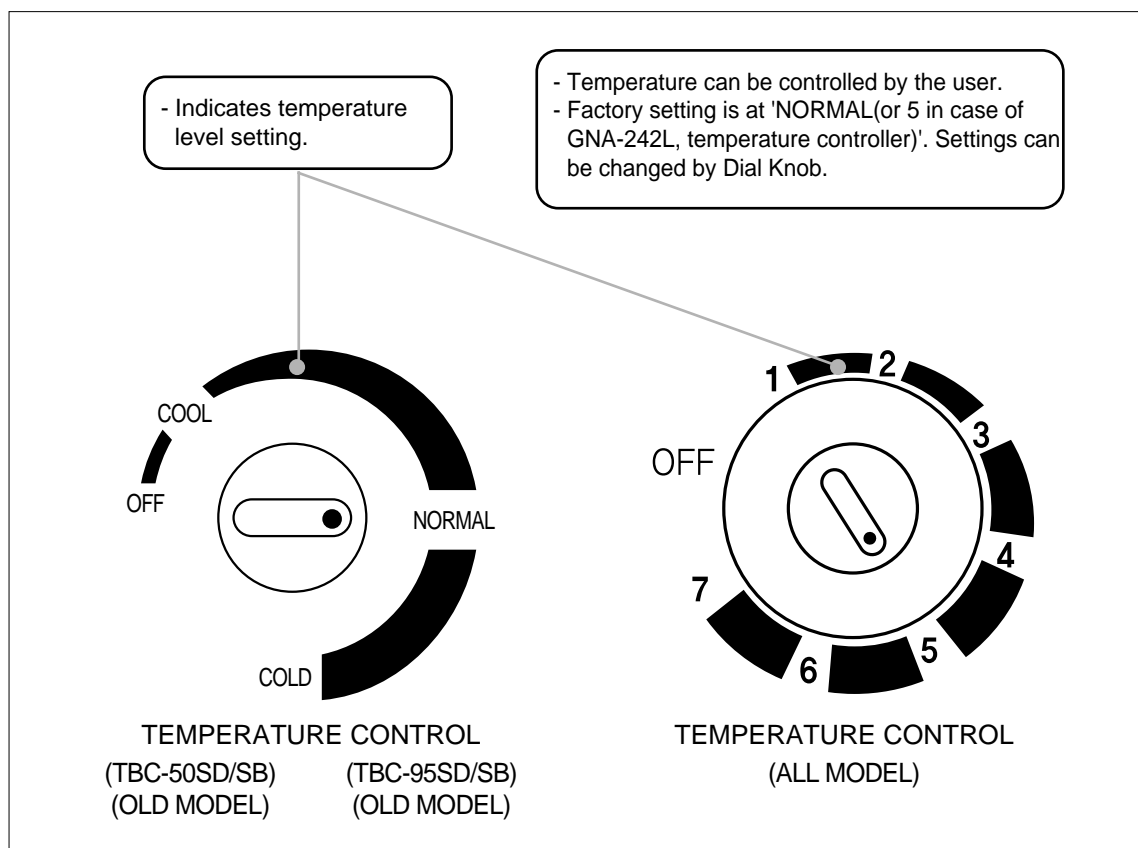
MODEL	PART NAME	PART NO.	RATING	MAKER
ALL MODEL	POWER SWITCH (ROCKER SWITCH)	30281Q0100	125V/15A	SKT
TBC-50SD/SB (OLD MODEL)	THERMOSTAT	30283M0100	K55Q-5608, 16A	RANCO
TBC-95SD/SB (OLD MODEL)	THERMOSTAT	30283L0100	K55Q-5607, 16A	RANCO
ALL MODEL	THERMOSTAT	30283F1000	GNA-242L, 20A	SHIN HAN





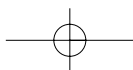
5. TEMPERATURE CONTROL INSTRUCTION

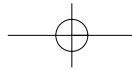
5-1. HOW TO USE THE TEMPERATURE CONTROLLER



5-2. FUNCTION TABLE

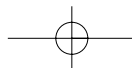
No	Function	Controlled Part	Description																																				
1	Temperature Controller Model: TBC-50SD/SB (OLD MODEL) (K55Q-5608) Model: TBC-95SD/SB (OLD MODEL) (K55Q-5607) Model: ALL MODEL (GNA-242L)	Compressor Cond. Fan Motor	<p>1. The temperature can be changed by turning the dial knob. 2. Compressor is automatically turned on and off by thermostat.</p> <p>■ Cut in and out temperature chart. °F (at evaporator coil)</p> <table> <tr> <th>No.</th><th>Cool</th><th>Normal</th><th>Cold</th></tr> <tr> <td>Cut in</td><td>40.1 ± 2.7</td><td>40.1 ± 2.7</td><td>40.1 ± 2.7</td></tr> <tr> <td>Cut out</td><td>21.2</td><td>17.1</td><td>10.4</td></tr> </table> <table> <tr> <th>No.</th><th>Cool</th><th>Normal</th><th>Cold</th></tr> <tr> <td>Cut in</td><td>40.1 ± 2.7</td><td>40.1 ± 2.7</td><td>40.1 ± 2.7</td></tr> <tr> <td>Cut out</td><td>23.9</td><td>21.2</td><td>17.6</td></tr> </table> <table> <tr> <th>No.</th><th>Cool(1)</th><th>Normal(5)</th><th>Cold(7)</th></tr> <tr> <td>Cut in</td><td>46.4</td><td>41.0</td><td>37.0</td></tr> <tr> <td>Cut out</td><td>23</td><td>15.8</td><td>9.5</td></tr> </table>	No.	Cool	Normal	Cold	Cut in	40.1 ± 2.7	40.1 ± 2.7	40.1 ± 2.7	Cut out	21.2	17.1	10.4	No.	Cool	Normal	Cold	Cut in	40.1 ± 2.7	40.1 ± 2.7	40.1 ± 2.7	Cut out	23.9	21.2	17.6	No.	Cool(1)	Normal(5)	Cold(7)	Cut in	46.4	41.0	37.0	Cut out	23	15.8	9.5
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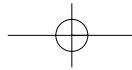




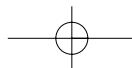
6. SPARE PARTS LIST

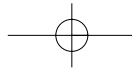
Part name	Code	Description	Model		
			50	65	95
LID PARTS					
LID	30200B6100	EXCEPT LID HANDLE	2		
LID	30200B6110	EXCEPT LID HANDLE		2	3
LID HANDLE	30226B0100	ABS BLACK COLOR	2	2	3
COMPRESSOR COMPARTMENT					
COMPRESSOR BASE	30200B0900	SPG T2.0	1	1	
COMPRESSOR BASE	30200B4100	SPG T2.0			1
COMPRESSOR (FOR OLD 50SD/SB MODEL)	30200B4200	CAE4440Y(115V/60Hz)	1		
COMPRESSOR	30200Q1200	SK1A1C-L2W	1	1	
COMPRESSOR	30200B4500	CAE4456Y(115V/60Hz)			1
COMPRESSOR HARNESS ASSEMBLY (FOR OLD 50SD/SB MODEL)	30227B1500		1		1
COMPRESSOR HARNESS ASSEMBLY(A)	30227L3110	P-RELAY HARNESS	1	1	
COMPRESSOR HARNESS ASSEMBLY(B)	30227B1600	CAPACITOR HARNESS	1	1	
CONDENSER FAN MOTOR	3963220410	IS-4420DWSG-1	1	1	1
CONDENSER FAN BLADE	30218B0300	AL ø200	1	1	1
CONDENSER FAN MOTOR BRACKET	3020602200	SPG T2.0	1	1	1
CONDENSER COIL	30200B3500	CU, R8 * C4	1	1	
CONDENSER COIL	30200B3600	CU, R8 * C8			1
COMPRESSOR PULL-OUT (FOR OLD 50SD/SB MODEL)	30244B3200	CU, ODø6.35	1		
COMPRESSOR PULL-OUT	30244B3210	CU, ODø6.35	1	1	
COMPRESSOR PULL-OUT	30244B3300	CU, ODø6.35			1
CONNECTING PIPE(CONDENSER↔DRYER)	30244B3400	CU, ODø7.94	1	1	
CONNECTING PIPE(CONDENSER↔DRYER)	30244B3410	CU, ODø7.94			1
COMPRESSOR DRYER	30268L0300	XH-9, 50g, ø3.1	1	1	
COMPRESSOR DRYER	30268L0400	XH-9, 50g, ø3.5			1
CAPILLARY TUBE	30244B2910	IDø1.6 * L2375	1	1	
CAPILLARY TUBE	30244B2920	IDø2.0 * L2375			1
SUCTION LINE	30200B3700	CU, ODø7.94	1	1	
SUCTION LINE	30200B3800	CU, ODø9.52			1
POWER CORD	30213A1012	KKP-30	1	1	1
GRILLE ASSEMBLY	30200B4400	STAINLESS STEEL/BLACK	2	2	2
REFRIGERATION COMPARTMENT					
EVAPORATOR COIL	30270B0210	CU, R6 * C2	1	1	
EVAPORATOR COIL	30270B0310	CU, R11 * C2			1
DUCT(A)(INCLUDES FAN SHROUD) (FOR OLD 50SD/SB MODEL)	30200B4300	STAINLESS STEEL	1		1
DUCT(A)	30269B1100	ABS BLACK COLOR	1	1	1
	30269B1200				
DUCT(B)(LOUVERED)	30269B0500	STAINLESS STEEL	1		
DUCT(B)(LOUVERED)	30269B0510	STAINLESS STEEL		1	
DUCT(B)(LOUVERED)	30269B0600	STAINLESS STEEL			1
DUCT(C)	30220B1000	STAINLESS STEEL			1
DUCT(D)	30220B1100	STAINLESS STEEL			1
EVAPORATOR DRAIN ELBOW	30225L0100	NA-6	1	1	1





Part name	Code	Description	Model		
			50	65	95
EVAPORATOR DRAIN ELBOW CAP	30209L0200	NA-6	1	1	1
EVAPORATOR DRAIN HOSE	30232A0200	PVC, L=140mm	1	1	1
LEAK TEST COVER	30214B2900	STAINLESS STEEL	1	1	
LEAK TEST COVER	30214B3000	STAINLESS STEEL			1
EVAPORATOR FAN MOTOR	3963339900	DAI-6152DEUA	2	2	2
EVAPORATOR FAN BLADE	3011802400	NA-66, ø110	2	2	2
EVAPORATOR FAN MOTOR BRACKET (OLD)	30220T0300	STAINLESS STEEL	4		4
EVAPORATOR FAN MOTOR BRACKET	30206M3701	STAINLESS STEEL	2	2	2
EVAPORATOR FAN MOTOR HARNESS ASSEMBLY	30227B1100		1	1	1
TEMPERATURE CONTROLLER BOX	30245B1600	STAINLESS STEEL	1		
TEMPERATURE CONTROLLER BOX	30245B1620	STAINLESS STEEL		1	
TEMPERATURE CONTROLLER BOX	30245B1610	STAINLESS STEEL			1
TEMPERATURE CONTROLLER (THERMOSTAT) (OLD)	30283M0100	K55Q-5608	1		
TEMPERATURE CONTROLLER (THERMOSTAT) (OLD)	30283L0100	K55Q-5607			1
TEMPERATURE CONTROLLER (THERMOSTAT)	30283F1000	GNA-242L	1	1	1
POWER SWITCH	30281Q0100	125V/15A	1	1	1
TEMPERATURE CONTROL LER KNOB	30234A1000	HIPS WHITE COLOR	1	1	1
TEMPERATURE CONTROL LER HARNESS ASSEMBLY	30227B1200		1	1	1
COUNTERTOP PARTS					
COUNTERTOP(URETHANE FOAM INSIDE)	30200B5700	STAINLESS STEEL	1		
COUNTERTOP(URETHANE FOAM INSIDE)	30200B5720	STAINLESS STEEL		1	
COUNTERTOP(URETHANE FOAM INSIDE)	30200B5710	STAINLESS STEEL			1
COUNTERTOP FRAME ASSEMBLY	30222B1500	STAINLESS STEEL	1		
COUNTERTOP FRAME ASSEMBLY	30222B1510	STAINLESS STEEL		1	
COUNTERTOP FRAME ASSEMBLY	30222B1600	STAINLESS STEEL			1
LID RAIL LEFT	30287B0230	ABS BLACK COLOR	1	1	1
LID RAIL RIGHT	30287B0240	ABS BLACK COLOR	1	1	1
LID RAIL FRONT	30287B0210	ABS BLACK COLOR	1		
LID RAIL FRONT	30287B0250	ABS BLACK COLOR		1	
LID RAIL FRONT	30287B0220	ABS BLACK COLOR			1
LID RAIL MIDDLE	30287B0110	ABS BLACK COLOR	1	1	2
LID RAIL COVER("U" SHAPE)	30225B0100	STAINLESS STEEL	4	4	6
AIR GUIDE	30225B0400	STAINLESS STEEL	1		
AIR GUIDE	30225B0410	STAINLESS STEEL		1	
AIR GUIDE	30225B0500	STAINLESS STEEL			1
MISCELLANEOUS					
DIVIDER	30278B0600	PE COATING	3	4	
DIVIDER	30278B0700	PE COATING			6
DIVIDER BUSH(CLIP)	30207B0100	NA-66, ø10	54	72	144
DIVIDER SPRING	30251B0200	STAINLESS STEEL	3	4	6
SHELF BOTTOM	30278B0800	PE COATING	2		
SHELF BOTTOM	30278B0900	PE COATING		3	5
CAP CATCHER ASSEMBLY(WITH CAP OPENER)	30200B6400	EMBLEM INCLUDED	1	1	2
CONDENSATE DRAIN PAN	30211B0100	HIPS BLACK COLOR	1	1	1





7. REPLACEMENT OF MAIN COMPONENTS

*** Turn the unit off before replacing any part.**

7-1. REPLACING THE EVAPORATOR COIL

A. Remove all lids. Remove the dividers.

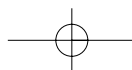


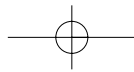
(Now, you can replace the evaporator fan motor or the temperature control (thermostat) if you unscrew the duct(A) or the temperature control box.)

**B. Cut the silicone line around the countertop frame with a knife.
Remove all screws in back of the countertop frame.**



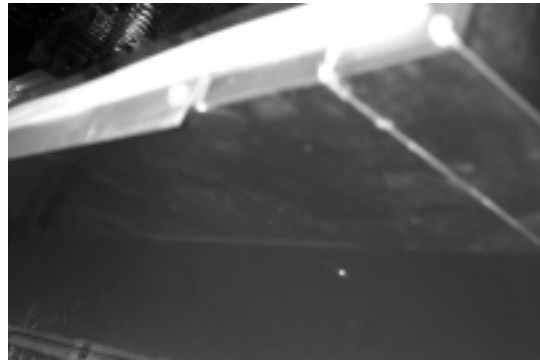
**C. Remove all the screws around the lid rail.
Lift the countertop from the rear first. Push countertop forward and top will come off.**



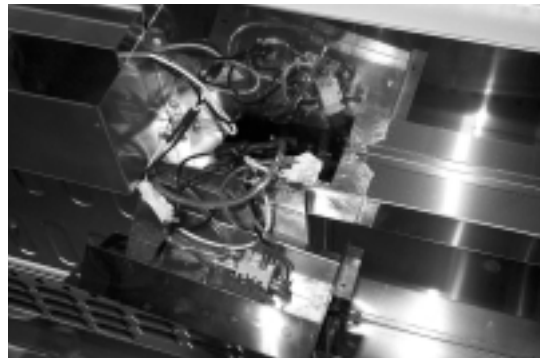


REPLACEMENT OF MAIN COMPONENTS

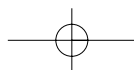
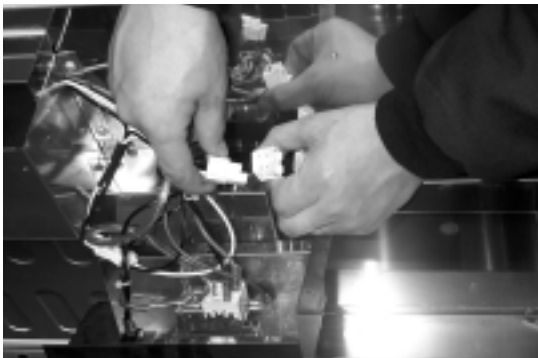
- D. Carefully move the countertop to a safe place.
See the join bracket and understand join system.**

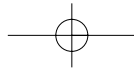


- E. This is the duct(A) and the temperature control box.
Unscrew the temperature control box if necessary.**



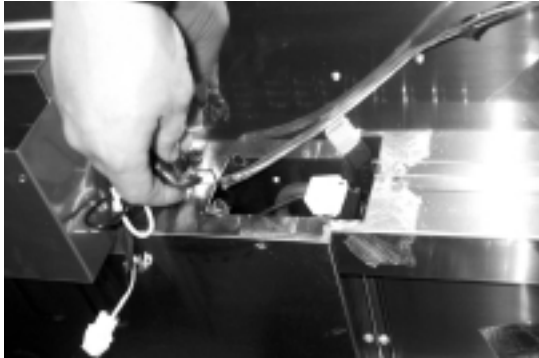
- F. Unplug the temperature control harness assembly.**





REPLACEMENT OF MAIN COMPONENTS

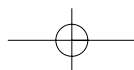
- G. Pull the sensing tube of the temperature control.
Replace the temperature control if necessary.**

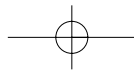


- H. Remove the screws on duct(A) and remove.**



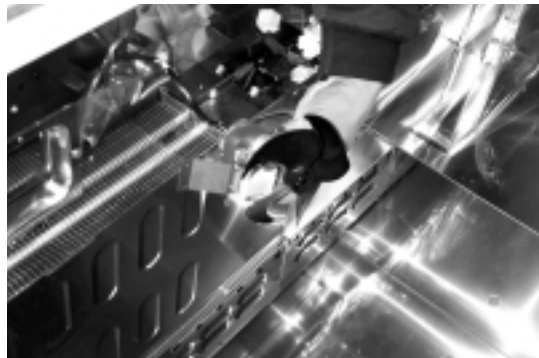
- I. Unplug the evaporator fan motor harness assembly if necessary.**



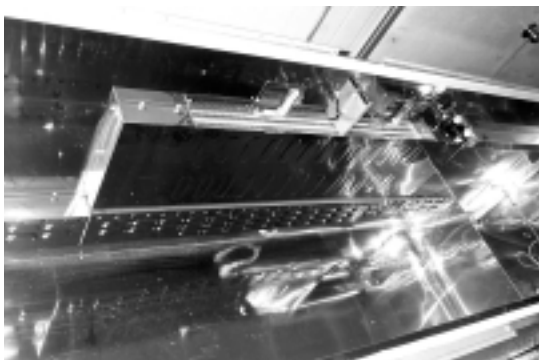


REPLACEMENT OF MAIN COMPONENTS

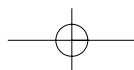
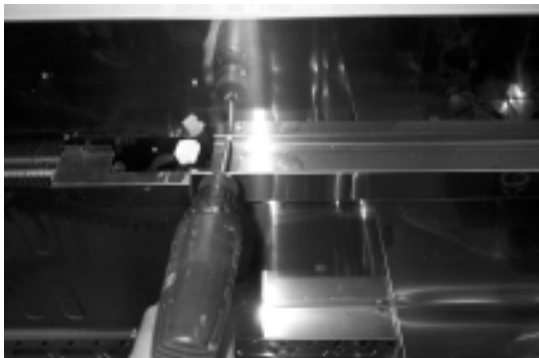
J. Remove screws to the evaporator fan motor if necessary and replace it with new one.

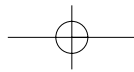


K. Remove the screws on duct(B) and remove.



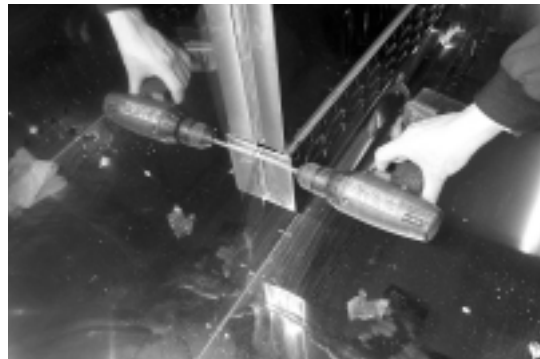
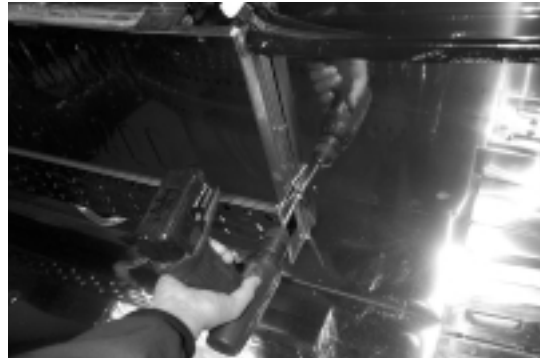
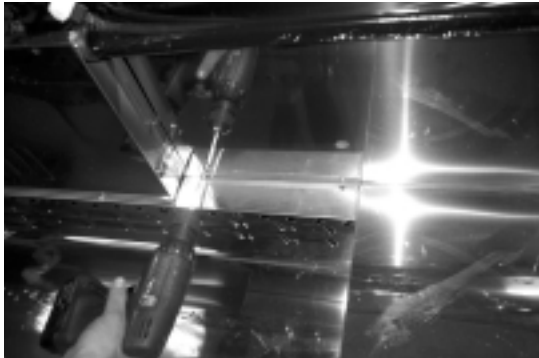
L. Remove the screws on the suction line cover (horizontal) if necessary.





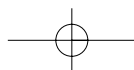
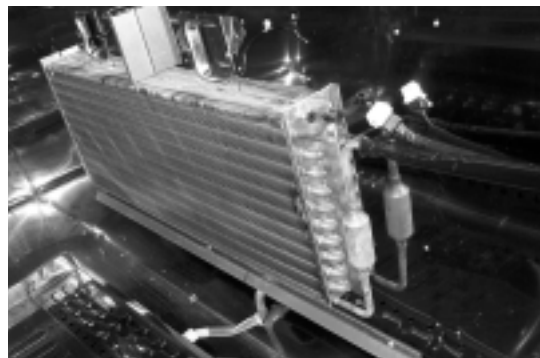
REPLACEMENT OF MAIN COMPONENTS

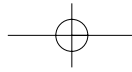
M. Remove screws to the duct(C) and the duct(D) if necessary.



N. Now evaporator coil is visible.

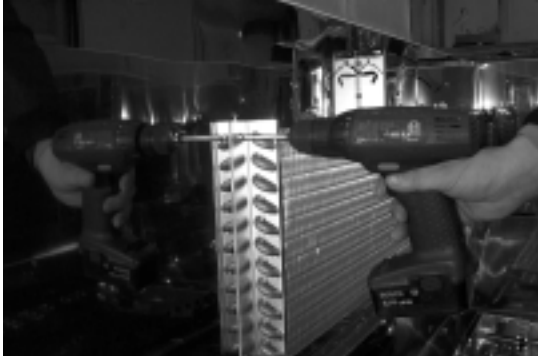
To replace it, cut out at the welding point between the accumulator and the suction line, and also of the end of the capillary tube.





REPLACEMENT OF MAIN COMPONENTS

O. Remove screws to the evaporator coil and replace it with new one.

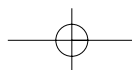


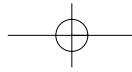
7-2. ACCESSING CONDENSER COMPARTMENT

**A. After removing the front grille assembly, unscrew the compressor base.
Pull the compressor compartment slowly.
Compressor, condenser coil, condenser fan motor, etc. can be replaced.**



- In pushing the compressor compartment to the original position, please be careful so the capillary tube does not bend.





ABOUT THIS MANUAL

VISION CREATIVE, INC.

5가 526

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		TEL	
MODEL	TBC - 50SD/SB,65SD/SB,95SD/SB(S/M)		
BUYER			
	1	07.11.26	6
	2		7
	3		8
	4		9
	5		10
MEMO			
07.11.26 - (1~12p)			
07.12.05 - 9,10,11,12 - (4p)			
07.12.27 - 10p - (1p)			

VISION

TEL: 757 - 9340 FAX: 774 - 1039

